(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 9 June 2005 (09.06.2005)

PCT

(10) International Publication Number WO 2005/052902 A1

(51) International Patent Classification⁷:

G09G 3/20

(21) International Application Number:

PCT/EP2004/013436

(22) International Filing Date:

26 November 2004 (26.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03078717.0

26 November 2003 (26.11.2003) EP

- (71) Applicant (for all designated States except US): BARCO N.V. [BE/BE]; President Kennedypark 35, B-8500 Kortrijk (BE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KIMPE, Tom [BE/BE]; Meersstraat 34, B-9000 Gent (BE).
- (74) Agents: BIRD, Ariane et al.; Bird Goën & Co., Klein Dalenstraat 42A, B-3020 Winksele (BE).

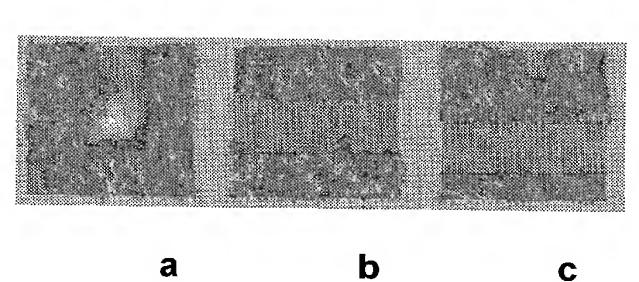
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

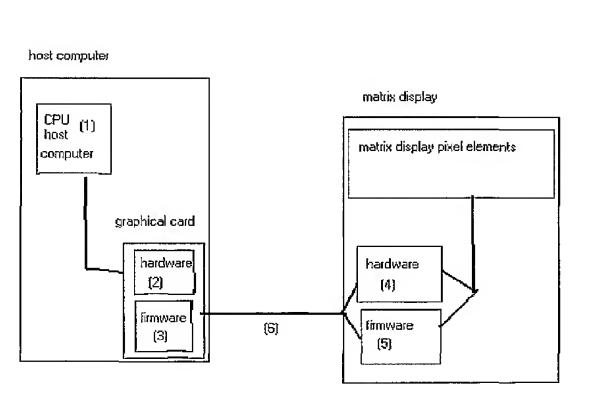
[Continued on next page]

(54) Title: METHOD AND DEVICE FOR VISUAL MASKING OF DEFECTS IN MATRIX DISPLAYS BY USING CHARAC-TERISTICS OF THE HUMAN VISION SYSTEM



a

C



(57) Abstract: The present invention provides a method for reducing the visual impact of defects present in a matrix display comprising a plurality of pixels, said pixels comprising at least three sub-pixels, each sub-pixel intended for generating a sub-pixel colour which cannot be obtained by a linear combination of the sub-pixel colours of the other sub-pixels of the pixel, the method comprising: providing a representation of a human vision system, characterising at least one defect sub-pixel present in the display, the defect sub-pixel intended for generating a first sub-pixel colour, the defect sub-pixel being surrounded by a plurality of non-defective sub-pixels, deriving drive signals for at least some of the plurality of non-defective sub pixels in accordance with the representation of the human vision system and the characterising of the at least one defect sub-pixel, to thereby minimise an expected response of the human vision system to the defect sub-pixel, and driving at least some of the plurality of non-defective sub-pixels with the derived drive signals, wherein minimising the response of the human vision system to the defect subpixel comprises changing the light output value of at least one non-defective sub-pixel for generating another sub-pixel colour, said another sub-pixel colour differing from said first sub-pixel colour. The present invention also provides a

corresponding system for reducing the visual impact of defects present in a matrix display, and a matrix display with reduced visual impact of defects present in the display.

VO 2005/052902 A1

WO 2005/052902 A1



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.